

SEQUENZPROTOKOLL

<110> Memorec Stoffel GmbH

<120> Protease

<130> Protease Memorec

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<151> 1999-01-22

<150> 19925946.1

<151> 1999-06-08

<150> 19929115.2

<151> 1999-06-24

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<170> PatentIn Ver. 2.1

<210> 1

<211> 592

<212> PRT

<213> Homo sapiens

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Asn Pro Gln Trp Ala His Leu Pro His Asp Leu Ser Lys Ala Ser Phe
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Leu Gln Leu Arg Asn Trp Thr Ala Ser Leu Leu Cys Ser Ala Ala Asp
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Leu Pro Ala Arg Gly Phe Ser Asn Gln Ile Pro Leu Val Ala Arg Gly
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Asn Cys Thr Phe Tyr Glu Lys Val Arg Leu Ala Gln Gly Ser Gly Ala
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Arg Gly Leu Leu Ile Val Ser Arg Glu Arg Leu Val Pro Pro Gly Gly
115 120 125

Asn Lys Thr Gln Tyr Asp Glu Ile Gly Ile Pro Val Ala Leu Leu Ser
130 135 140

- 2 -

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 Ala Ala Leu Tyr Ala Pro Lys Glu Pro Val Leu Asp Tyr Asn Met Val
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 Ile Ile Phe Ile Met Ala Val Gly Thr Val Ala Ile Gly Gly Tyr Trp
 180 185 190
 Ala Gly Ser Arg Asp Val Lys Lys Arg Tyr Met Lys His Lys Arg Asp
 195 200 205
 Asp Gly Pro Glu Lys Gln Glu Asp Glu Ala Val Asp Val Thr Pro Val
 210 215 220
 Met Thr Cys Val Phe Val Val Met Cys Cys Ser Met Leu Val Leu Leu
 225 230 235 240
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 245 250 255
 Leu Ala Ser Ala Thr Gly Leu Tyr Ser Cys Leu Ala Pro Cys Val Arg
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 Arg Leu Pro Phe Gly Lys Cys Arg Ile Pro Asn Asn Ser Leu Pro Tyr
 275 280 285
 Phe His Lys Arg Pro Gln Ala Arg Met Leu Leu Leu Ala Leu Phe Cys
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 325 330 335
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 385 390 395 400
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 <213> Homo sapiens

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 35 40 45
 Trp Thr Ala Leu Pro Ser Thr Leu Glu Asn Ala Thr Ser Ile Ser Leu
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 Met Asn Leu Thr Ser Thr Pro Leu Cys Asn Leu Ser Asp Ile Pro Pro
 65 70 75 80
 Val Gly Ile Lys Ser Lys Ala Val Val Val Pro Trp Gly Ser Cys His
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 Phe Leu Glu Lys Ala Arg Ile Ala Gln Lys Gly Gly Ala Glu Ala Met
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 115 120 125

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 Phe Arg Asp Met Asn Gln Thr Leu Gly Asp Asn Ile Thr Val Lys Met
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 165 170 175
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 195 200 205
 Arg Lys Lys Lys Glu Glu Tyr Leu Thr Phe Ser Pro Leu Thr Val Val
 210 215 220
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 Tyr Lys Trp Leu Val Tyr Val Met Ile Ala Ile Phe Cys Ile Ala Ser
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Ile Leu Thr Phe Val Val Leu Val Leu Met Lys Lys Gly Gln Pro Ala
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<213> Homo sapiens

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Phe Gly Ala Leu Arg Ser Val Arg Cys Ala Arg Gly Lys Asn Ala Ser
 50 55 60

Asp Met Pro Glu Thr Ile Thr Ser Arg Asp Ala Ala Arg Phe Pro Ile
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Ile Ala Ser Cys Thr Leu Leu Gly Leu Tyr Leu Phe Phe Lys Ile Phe
 85 90 95

Ser Gln Glu Tyr Ile Asn Leu Leu Leu Ser Met Tyr Phe Phe Val Leu
 100 105 110

Gly Ile Leu Ala Leu Ser His Thr Ile Ser Pro Phe Met Asn Lys Phe
 115 120 125

Phe Pro Ala Ser Phe Pro Asn Arg Gln Tyr Gln Leu Leu Phe Thr Gln
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Gly Ser Gly Glu Asn Lys Glu Glu Ile Ile Asn Tyr Glu Phe Asp Thr
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Lys Asp Leu Val Cys Leu Gly Leu Ser Ser Ile Val Gly Val Trp Tyr
 165 170 175

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 195 200 205
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 225 230 235 240
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 245 250 255
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 35 40 45
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 50 55 60

- 7 -

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 Val Phe Thr Ile Cys Thr Ala Val Leu Ala Thr Ile Ala Phe Ala Phe
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 Leu Leu Leu Pro Met Cys Gln Tyr Leu Thr Arg Pro Cys Ser Pro Gln
 115 120 125
 Asn Lys Ile Ser Phe Gly Cys Cys Gly Arg Phe Thr Ala Ala Glu Leu
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 Leu Ser Phe Ser Leu Ser Val Met Leu Val Leu Ile Trp Val Leu Thr
 145 150 155 160
 Gly His Trp Leu Leu Met Asp Ala Leu Ala Met Gly Leu Cys Val Ala
 165 170 175
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 195 200 205
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 210 215 220
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 325 330 335
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 340 345 350
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 <213> Mus musculus

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 35 40 45
 Met Val Met Lys Thr Gly Gln Pro Ala Leu Leu Tyr Leu Val Pro Cys
 50 55 60
 Thr Leu Ile Thr Val Ser Val Val Ala Trp Ser Arg Lys Glu Met Lys
 65 70 75 80
 Lys Phe Trp Lys Gly Ser Ser Tyr Gln Val Met Asp His Leu Asp Tyr
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Gln

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 35 40 45
 Phe Gly Ala Leu Pro Ser Val Arg Cys Ala Arg Gly Lys Ser Ser Ser
 50 55 60
 Asp Met Pro Glu Thr Ile Thr Ser Arg Asp Ala Ala Arg Phe Pro Ile
 65 70 75 80
 Ile Ala Ser Cys Thr Leu Leu Gly Leu Tyr Leu Phe Phe Lys Ile Phe
 85 90 95

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Ser Gln Glu Tyr Ile Asn Leu Leu Leu Ser Met Tyr Phe Phe Val Leu
 100 105 110
 Gly Ile Leu Ala Leu Ser His Thr Ile Ser Pro Phe Met Asn Lys Phe
 115 120 125
 Phe Pro Ala Asn Phe Pro Asn Arg Gln Tyr Gln Leu Leu Phe Thr Gln
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 Gly Ser Gly Glu Asn Lys Glu Glu Ile Ile Asn Tyr Glu Phe Asp Thr
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 Lys Asp Leu Val Cys Leu Gly Leu Ser Ser Val Val Gly Val Trp Tyr
 165 170 175
 Leu Leu Arg Lys His Trp Ile Ala Asn Asn Leu Phe Gly Leu Ala Phe
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 Ser Leu Asn Gly Val Glu Leu Leu His Leu Asn Asn Val Ser Thr Gly
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 Cys Ile Leu Leu Gly Gly Leu Phe Ile Tyr Asp Ile Phe Trp Val Phe
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 Gly Thr Asn Val Met Val Thr Val Ala Lys Ser Phe Glu Ala Pro Ile
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 Lys Leu Val Phe Pro Gln Asp Leu Leu Glu Lys Gly Leu Glu Ala Asp
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 Ile Ala Leu Leu Leu Arg Phe Asp Ile Ser Leu Lys Lys Asn Thr His
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 Thr Tyr Phe Tyr Thr Ser Phe Ala Ala Tyr Ile Phe Gly Leu Gly Leu
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 Thr Ile Phe Ile Met His Ile Phe Lys His Ala Gln Pro Ala Leu Leu
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 Tyr Leu Val Pro Ala Cys Ile Gly Phe Pro Val Leu Val Ala Leu Ala
 325 330 335
 Lys Gly Glu Val Ala Glu Met Phe Ser Tyr Glu Glu Ser Asn Pro Lys
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<212> PRT

<213> Mus musculus

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<400> 7

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 Thr Gly His Trp Leu Leu Met Asp Ala Leu Ala Met Gly Leu Cys Val
 35 40 45
 Ala Met Ile Ala Phe Val Arg Leu Pro Ser Leu Lys Val Ser Cys Leu
 50 55 60
 Leu Leu Ser Gly Leu Leu Ile Tyr Asp Val Phe Trp Val Phe Phe Ser
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 Ala Tyr Ile Phe Asn Ser Asn Val Met Val Lys Val Ala Thr Gln Pro
 85 90 95
 Ala Asp Asn Pro Leu Asp Val Leu Ser Arg Lys Leu His Leu Gly Pro
 100 105 110
 Asn Val Gly Arg Asp Val Pro Arg Leu Ser Leu Pro Gly Lys Leu Val
 115 120 125
 Phe Pro Ser Ser Thr Gly Ser His Phe Ser Met Leu Gly Ile Gly Asp
 130 135 140
 Ile Val Met Pro Gly Leu Leu Leu Cys Phe Val Leu Arg Tyr Asp Asn
 145 150 155 160
 Tyr Lys Lys Gln Ala Ser Gly Asp Ser Cys Gly Ala Pro Gly Xaa Ala
 165 170 175
 Asn Ile Ser Gly Arg Met Gln Lys Val Ser Tyr Phe His Cys Thr Leu
 180 185 190
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 195 200 205
 His Arg Ala Ala Gln Pro Ala Leu Leu Tyr Leu Val Pro Phe Thr Leu
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<211> 587

<212> PRT

<213> *Saccharomyces cerevisiae*

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 35 40 45
 Asn His Asn Asn Lys Leu Thr Thr Ala Phe Asp Lys Ile Ser Tyr Arg
 50 55 60
 Val Ala His Lys Ile Thr His Leu Val Glu Ser His Ser Leu Val Phe
 65 70 75 80
 Asn Tyr Ala Thr Leu Val Leu Ile Ala Ser Ala Leu Val Val Ile Gly
 85 90 95
 Ser Phe Thr Ser Ile Ser Ser Ile Pro Phe Thr Ala Leu Pro Pro Thr
 100 105 110
 Arg Glu His Ser Leu Phe Asp Pro Thr Asp Phe Asp Val Asp His Asp
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 Cys His Val Ile Tyr Arg Glu Asn Asp Glu Asp Lys Lys Lys Lys Lys
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 Lys Ser Lys Arg Phe Phe Asp Met Met Asp Glu Lys His Ala Ile Ile
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 Leu Pro Leu Thr Ser Gly Cys Thr Leu Leu Ala Leu Tyr Phe Val Ile
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 Lys Lys Leu His Leu Asn Trp Leu Lys Tyr Val Val Lys Ile Leu Asn
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 195 200 205
 Tyr Phe Leu Asn Ser Leu Phe Arg Asn Leu Ser His Leu Ala Ser Trp
 210 215 220
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 225 230 235 240
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 245 250 255
 Lys Asp Gly Leu Thr Asn Ser Val Val His Lys Lys Thr Leu Asp Glu
 260 265 270
 Ile Glu Lys Asp His Trp Met Lys His Phe Tyr Arg Arg Glu Leu Val
 275 280 285
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 290 295 300

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Asn Ser Ala Leu Ile Val Ser Phe Val Leu Ser Ile Val Ser Thr Val
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 Tyr Phe Tyr Leu Ser Pro Asn Asp Trp Leu Ile Ser Asn Ala Val Ser
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 Lys Ser Gly Ala Leu Ile Leu Ile Ala Leu Phe Phe Tyr Asp Ile Cys
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 Asp His Asp Asp Thr Glu Phe His Phe Leu Asn Trp Ser Tyr Val Gly
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<210> 9
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 <212> DNA

<213> *Saccharomyces cerevisiae*

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1776

<210> 10

<211> 1560

<212> DNA

<213> *Homo sapiens*

<400> 10

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tggagacgta aggaaatgaa aaagtctctg aaaggtaaca gctatcagat gatggacat 1500
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<210> 11
 <211> 1131
 <212> DNA
 <213> Homo sapiens

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<400> 11
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ctcatggcgc tgcctgccat cttcttcggc ccctgcgt cgtacgctg cgcccgcggc 180
aagaatgctt cagacatgcc tgaacaatc accagccggg atgccgccg cttcccatc 240
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acagagatgt tcagttatga ggagtcaaat cctaaggatc cagcggcagt gacagaatcc 1080
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<210> 12
 <211> 1152
 <212> DNA
 <213> Homo sapiens

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<400> 12
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gaaaatcaag ataaggagaa agacagtaat agttcttctg ggtctttcaa tggcaacagc 180
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tctgtctctc ttttagtaat gttcttcttc tttgactcag ttcaagtagt ttttacaata 300
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- 15 -

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tttgtccttc gctatgacaa ctacaaaaag caagccagt gggactcctg tggggccct 900
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1152

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<210> 13
 <211> 339
 <212> DNA
 <213> Mus musculus

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<400> 13
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atgatcatta cctttgttgt cctgatgggt atgaaaacag ggcagcctgc tctcctctac 180
ttggtacctt gtacacttat tactgtctca gtcgttgctt ggagtcgtaa ggaaatgaaa 240
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339

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<210> 14
 <211> 1134
 <212> DNA
 <213> Mus musculus

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1134

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<210> 15
 <211> 771
 <212> DNA
 <213> Mus musculus

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gctctggcca tgggtctctg tgttgccatg atcgccctcg tccgctgcc aagcctcaag 180

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- 16 -

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<210> 16

<211> 1761

<212> DNA

<213> *Saccharomyces cerevisiae*

<400> 16

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1761

<210> 17

<211> 1560

<212> DNA

<213> *Homo sapiens*

<400> 17

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- 17 -

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<210> 18

<211> 520

<212> PRT

<213> Homo sapiens

<400> 18

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Gly Phe Leu Leu Gln Leu Thr Ala Ala Gln Glu Ala Ile Leu His Ala
      20             25             30

Ser Gly Asn Gly Thr Thr Lys Asp Tyr Cys Met Leu Tyr Asn Pro Tyr
      35             40             45

Trp Thr Ala Leu Pro Ser Thr Leu Glu Asn Ala Thr Ser Ile Ser Leu
      50             55             60

Met Asn Leu Thr Ser Thr Pro Leu Cys Asn Leu Ser Asp Ile Pro Pro
      65             70             75             80

Val Gly Ile Lys Ser Lys Ala Val Val Val Pro Trp Gly Ser Cys His
      85             90             95

Phe Leu Glu Lys Ala Arg Ile Ala Gln Lys Gly Gly Ala Glu Ala Met
      100            105            110

Leu Val Val Asn Asn Ser Val Leu Phe Pro Pro Ser Gly Asn Arg Ser
      115            120            125

Glu Phe Pro Asp Val Lys Ile Leu Ile Ala Phe Ile Ser Tyr Lys Asp
      130            135            140

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- 18 -

Phe Arg Asp Met Asn Gln Thr Leu Gly Asp Asn Ile Thr Val Lys Met
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 Tyr Ser Pro Ser Trp Pro Asn Tyr Asp Tyr Thr Met Val Gly Ile Phe
 165 170 175
 Gly Ile Ala Val Phe Thr Gly Ala Leu Ser Gly Tyr Trp Ser Gly Leu
 180 185 190
 Val Glu Leu Glu Asn Leu Lys Ala Val Thr Thr Glu Asp Arg Glu Met
 195 200 205
 Arg Lys Lys Lys Glu Glu Tyr Leu Thr Phe Ser Pro Leu Thr Val Val
 210 215 220
 Ile Phe Val Val Ile Cys Cys Val Met Met Val Leu Leu Tyr Phe Phe
 225 230 235 240
 Tyr Lys Trp Leu Val Tyr Val Met Ile Ala Ile Phe Cys Ile Ala Ser
 245 250 255
 Ala Met Ser Leu Tyr Asn Cys Leu Ala Ala Leu Ile His Lys Ile Pro
 260 265 270
 Tyr Gly Gln Cys Thr Ile Ala Cys Arg Gly Lys Asn Met Glu Val Arg
 275 280 285
 Leu Ile Phe Leu Ser Gly Leu Cys Ile Ala Val Ala Val Val Trp Ala
 290 295 300
 Val Phe Arg Asn Glu Asp Arg Trp Ala Trp Ile Leu Gln Asp Ile Leu
 305 310 315 320
 Gly Ile Ala Phe Cys Leu Asn Leu Ile Lys Thr Leu Lys Leu Pro Asn
 325 330 335
 Phe Lys Ser Cys Val Ile Leu Leu Gly Leu Leu Leu Leu Tyr Asp Val
 340 345 350
 Phe Phe Val Phe Ile Thr Pro Phe Ile Thr Lys Asn Gly Glu Ser Ile
 355 360 365
 Met Val Glu Leu Ala Ala Gly Pro Phe Gly Asn Asn Glu Lys Leu Pro
 370 375 380
 Val Val Ile Arg Val Pro Lys Leu Ile Tyr Phe Ser Val Met Ser Val
 385 390 395 400
 Cys Leu Met Pro Val Ser Ile Leu Gly Phe Gly Asp Ile Ile Val Pro
 405 410 415
 Gly Leu Leu Ile Ala Tyr Cys Arg Arg Phe Asp Val Gln Thr Gly Ser
 420 425 430
 Ser Tyr Ile Tyr Tyr Val Ser Ser Thr Val Ala Tyr Ala Ile Gly Met
 435 440 445

- 19 -

Ile Leu Thr Phe Val Val Leu Val Leu Met Lys Lys Gly Gln Pro Ala
 450 455 460

Leu Leu Tyr Leu Val Pro Cys Thr Leu Ile Thr Ala Ser Val Val Ala
 465 470 475 480

Trp Arg Arg Lys Glu Met Lys Lys Phe Trp Lys Gly Asn Ser Tyr Gln
 485 490 495

Met Met Asp His Leu Asp Cys Ala Thr Asn Glu Glu Asn Pro Val Ile
 500 505 510

Ser Gly Glu Gln Ile Val Gln Gln
 515 520

<210> 19

<211> 684

<212> PRT

<213> Homo sapiens

<400> 19

Met Ala Cys Leu Gly Phe Leu Leu Pro Val Gly Phe Leu Leu Leu Ile
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Ser Thr Val Ala Gly Gly Lys Tyr Gly Val Ala His Val Val Ser Glu
 20 25 30

Asn Trp Ser Lys Asp Tyr Cys Ile Leu Phe Ser Ser Asp Tyr Ile Thr
 35 40 45

Leu Pro Arg Asp Leu His His Ala Pro Leu Leu Pro Leu Tyr Asp Gly
 50 55 60

Thr Lys Ala Pro Trp Cys Pro Gly Glu Asp Ser Pro His Gln Ala Gln
 65 70 75 80

Leu Arg Ser Pro Ser Gln Arg Pro Leu Arg Gln Thr Thr Ala Met Val
 85 90 95

Met Arg Gly Asn Cys Ser Phe His Thr Lys Gly Trp Leu Ala Gln Gly
 100 105 110

Gln Gly Ala His Gly Leu Leu Ile Val Ser Arg Val Ser Asp Gln Gln
 115 120 125

Cys Ser Asp Thr Thr Leu Ala Pro Gln Asp Pro Arg Gln Pro Leu Ala
 130 135 140

Asp Leu Thr Ile Pro Val Ala Met Leu His Tyr Ala Asp Met Leu Asp
 145 150 155 160

Ile Leu Ser His Thr Arg Gly Glu Ala Val Val Arg Val Ala Met Tyr
 165 170 175

Ala Pro Pro Glu Pro Ile Ile Asp Tyr Asn Met Leu Val Ile Phe Ile
 180 185 190

- 20 -

Leu Ala Val Gly Thr Val Ala Ala Gly Gly Tyr Trp Ala Gly Leu Thr
 195 200 205
 Glu Ala Asn Arg Leu Gln Arg Arg Arg Ala Arg Arg Gly Gly Gly Ser
 210 215 220
 Gly Gly His His Gln Leu Gln Glu Ala Ala Ala Ala Glu Gly Ala Gln
 225 230 235 240
 Lys Glu Asp Asn Glu Asp Ile Pro Val Asp Phe Thr Pro Ala Met Thr
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 Gly Val Val Val Thr Leu Ser Cys Ser Leu Met Leu Leu Leu Tyr Phe
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 Phe Tyr Asp His Phe Val Tyr Val Thr Ile Gly Ile Phe Gly Leu Gly
 275 280 285
 Ala Gly Ile Gly Leu Tyr Ser Cys Leu Ser Pro Leu Val Cys His Leu
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 Ser Leu Arg Gln Tyr Gln Arg Pro Pro His Ser Leu Trp Ala Ser Leu
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 Pro Leu Pro Leu Leu Leu Leu Ala Ser Leu Cys Ala Thr Val Ile Ile
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 Phe Trp Val Ala Tyr Arg Asn Glu Asp Arg Trp Ala Trp Leu Leu Gln
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 Asp Thr Leu Gly Ile Ser Tyr Cys Leu Phe Val Leu His Arg Val Arg
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 Leu Pro Thr Leu Lys Asn Cys Ser Ser Phe Leu Leu Ala Leu Leu Ala
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 Phe Asp Val Phe Phe Val Phe Val Thr Pro Phe Phe Thr Lys Thr Gly
 385 390 395 400
 Glu Ser Ile Met Ala Gln Val Ala Leu Gly Pro Ala Glu Ser Ser Ser
 405 410 415
 His Glu Arg Leu Pro Met Val Leu Lys Val Pro Arg Leu Arg Val Ser
 420 425 430
 Ala Leu Thr Leu Cys Ser Gln Pro Phe Ser Ile Leu Gly Phe Gly Asp
 435 440 445
 Ile Val Val Pro Gly Phe Leu Val Ala Tyr Cys Cys Arg Phe Asp Val
 450 455 460
 Gln Val Cys Ser Arg Gln Ile Tyr Phe Val Ala Cys Thr Val Ala Tyr
 465 470 475 480
 Ala Val Gly Leu Leu Val Thr Phe Met Ala Met Val Leu Met Gln Met
 485 490 495

- 21 -

Gly Gln Pro Ala Leu Leu Tyr Leu Val Ser Ser Thr Leu Leu Thr Ser
 500 505 510
 Leu Ala Val Ala Ala Cys Arg Gln Glu Leu Ser Leu Phe Trp Thr Gly
 515 520 525
 Gln Gly Arg Ala Lys Met Cys Gly Leu Gly Cys Ala Pro Ser Ala Gly
 530 535 540
 Ser Arg Gln Lys Gln Glu Gly Ala Ala Asp Ala His Thr Ala Ser Thr
 545 550 555 560
 Leu Glu Arg Gly Thr Ser Arg Gly Ala Gly Asp Leu Asp Ser Asn Pro
 565 570 575
 Gly Glu Asp Thr Thr Glu Ile Val Thr Ile Ser Glu Asn Glu Ala Thr
 580 585 590
 Asn Pro Glu Asp Arg Ser Asp Ser Ser Glu Gly Trp Ser Asp Ala His
 595 600 605
 Leu Asp Pro Asn Glu Leu Pro Phe Ile Pro Pro Gly Ala Ser Glu Glu
 610 615 620
 Leu Met Pro Leu Met Pro Met Ala Met Leu Ile Pro Leu Met Pro Leu
 625 630 635 640
 Met Pro Pro Pro Ser Glu Leu Gly His Val His Ala Gln Ala Gln Ala
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 660 665 670
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<210> 20

<211> 2052

<212> DNA

<213> Homo sapiens

<400> 20

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